

## ABSTRACT OF THE DISCLOSURE

5 A method for controlling an internal combustion engine having a variable geometry turbocharger (VGT) and an exhaust gas recirculation (EGR) system in the face of sensor failures and mechanical faults includes generating accurate substitute values for use by the engine control logic when EGR and VGT system-related sensors are diagnosed as having failed during operation, and maintaining controlled performance of the VGT system in the face of sensor failures or mechanical faults associated with the EGR or VGT system.